UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/267,176	03/12/1999	MICHAEL C. BURKE	10807/04	6675

25223 7590 10/06/2006

WHITEFORD, TAYLOR & PRESTON, LLP
ATTN: GREGORY M STONE
SEVEN SAINT PAUL STREET
BALTIMORE, MD 21202-1626

EXAMINER	
MORGAN, ROBERT W	

ART UNIT	PAPER NUMBER
3626	

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/267,176	Applicant(s) BURKE ET AL.
	Examiner Robert W. Morgan	Art Unit 3626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-9,11-14,18-21 and 43-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9,11-14,18-21 and 43-61* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/13/06 has been entered.

Notice to Applicant

2. This communication is response to the amendment filed 9/13/06. Claims 1, 44, 51 and 52 have been amended. Now claims 1, 3-9, 11-14, 18-21 and 43-61 are presented for examination.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3-9, 11-14 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,047,274 to Johnson et al. and U.S. Patent No. 6,021,402 to Takriti in view of "Forecasting load-duration curves" by Bruce et al.

As per claim 1, Johnson et al. teaches a method for automatically managing energy cost using metering data and pricing data, the method comprising the steps of

--the claimed receiving metering data from a utility meter, wherein the metering data is electronically transmitted from the utility meter is met by the collection of actual energy usage

data from the end user's meter (12, Fig. 1) via the Internet (14, Fig. 12) (see: column 20, lines 50-60);

--the claimed receiving pricing data electronically over a network, wherein the pricing data is associated with a plurality of sources of power is met by the Energy Auction System ("EAS") that is made available to user via public or private wired or wireless telecommunication facilities (network) that receives information such as price rates from the Moderator (1, Fig. 1) and each control computer (8, Fig. 1) selects the Provider offering the lowest rate (or best economic value) at the time the users is using the a particular control computer (8, Fig. 1) (see: column 9, lines 3-14, 30-47, column 16, lines 28-36 and Fig. 1 and 11); and

--the claimed determining an optimal consumption decision based on the received pricing data and a predictable load, wherein the consumption decision selects one of the plurality of sources of power to thereby reduce utility costs is met by the Energy Providers submitting bids to supply (in order of the lowest-priced bids first) power to the end users and the control computer (8, Fig. 1) selects the best Energy Providers (three lowest) according to their lowest bids and amount of power offered (see: column 9, lines 30-47 and column 15, lines 15-27).

--the claimed delivering the optimal consumption decision to a customer via the network is met by the Energy Providers submitting bids to supply (in order of the lowest-priced bids first) power to the end users and the control computer (8, Fig. 1) selects the best Energy Providers (three lowest) according to their lowest bids and amount of power offered (see: column 9, lines 30-47 and column 15, lines 15-27). In addition, Johnson et al. teaches an Energy Auction System ("EAS") which is made available to users via public or private wired or wireless telecommunication facilities (network) and receives information such as price rates from the

Moderator (1, Fig. 1) and the control computer (8, Fig. 1) selects the Energy Provider offering the lowest rate (or best economic value) at the time the users is using a particular control computer (8, Fig. 1) (see: column 9, lines 3-14, 30-47, column 16, lines 28-36 and Fig. 1 and 11).

--the claimed determining a price baseline for combination of the plurality of the sources of power, wherein the price baseline is determined by price point data for the plurality of sources of power, the forecast load and percentage of the forecast load which will be met by each of plurality of sources of power is met by the Moderator preparing and transmitting to each end user a consolidated billing statement (used to forecast load based on billing statement for entire billing cycle or previous bill), based on the actual energy usage data received by the Moderator from that end user's meter during an entire billing cycle and winning the bid data relating to all selected Providers (price baseline from the plurality of sources of power that won the bid to supply the user) who supplied electric power or natural gas to this end user during that billing cycle (i.e. consolidating billable charges from all Providers of electric power to such end user n one bill and consolidating billable charges from all Providers of natural gas to such end user on another bill) (see: column 10, lines 23-34). This suggests that the winning bid includes all selected Providers (more than one Provider suggesting a percentage) who supply electric power or natural to user. In addition, Johnson et al. teaches an Energy Auction System ("EAS") which is made available to users via public or private wired or wireless telecommunication facilities (network) and receives information such as price rates from the Moderator (1, Fig. 1) and the control computer (8, Fig. 1) selects the Energy Provider offering the lowest rate (or best economic value) at the time the users is using a particular control computer (8, Fig. 1) (see: column 9, lines 3-14, 30-47, column 16, lines 28-36 and Fig. 1 and 11).

Johnson et al. teaches that the Energy Providers submitting bids to supply (in order of the lowest-priced bids first) power to the end users and the control computer (8, Fig. 1) selects the best Energy Providers (three lowest) according to their lowest bids and amount of power offered (see: column 9, lines 30-47 and column 15, lines 15-27).

Johnson et al. fails to expressly teach:

--the claimed optimal consumption decision is calculated using an optimal cost curve derived from an optimization algorithm applied to the pricing data and forecasting load; and

--the claimed forecasting a forecast load based on the received metering data from the utility meter, wherein said forecasting includes the steps of creating a current load shape from said metering data, and comparing the current load shape to a load shape from a prior time period based on historical data.

Takriti teaches a computer implemented risk-management system for electric utilities that allows a user to generate multiple load forecasts according to the variation in fuel prices to meet the electric demand of customers at a minimal cost (see: abstract). The system includes cost function for generating electricity from a generator as well as solving a stochastic unit commitment problem by assuming the given cost curve and independent and algorithm to determine the lowest price of electricity needed to meet customer demand.

Therefore, it would have been obvious to a person of ordinary skill in the art at time the invention was made to include the cost function as well as the cost curve as taught by Takriti with computer-assisted sales system for utilities as taught by Johnson with the motivation of allowing utility companies an opportunity to complete with each other and against independent

suppliers regardless of their geographic location at the same time benefiting the consumer (see: Takriti: column 1, lines 26-35).

In addition, Johnson et al. and Takriti teach the collection of actual energy usage data from the end user's meter (12, Fig. 1) (read on "received metering data from the utility meter") via the Internet (14, Fig. 12) (see: Johnson et al.: column 20, lines 50-60).

Johnson et al. and Takriti fails to teach:

--the claimed forecasting a forecast load, wherein said forecasting includes the steps of creating a current load shape from said metering data, and comparing the current load shape to a load shape from a prior time period based on historical data.

Bruce et al. teaches a new method for forecasting electricity load-duration curves that estimates sample moments obtained from historical data for a particular time period in this case a week (see: paragraph 3, 8 and abstract). Bruce et al. further teaches a load-duration curve defined over a period of a week that includes significant variation due to weather, holidays, etc. (see: paragraph 8). In addition, Bruce et al. teaches a performance of forecast models in Fig. 4, where combined forecasting is compared to actual data and preliminary evaluations determine whether load curve forecasting procedure are consistently producing good forecasts over different periods of data and whether they are good enough to be incorporated into a production system (see: paragraph 54).

Therefore, it would have been obvious to a person of ordinary skill in the art at time the invention was made to include a new method for forecasting electricity load-duration curves as taught by Bruce et al. with the system taught by Johnson et al. and Takriti with the motivation of addressing concerns regarding load-duration curve and providing important measures of

reliability such as loss of load probability and the expected unserved demand (see: Bruce et al.: paragraph 2).

As per claims 3-5, Johnson et al. teaches the claimed utility meter comprises an electric meter and a gas meter (see: column 6, lines 4-10).

Johnson et al. fails to teach the claimed utility meter comprises a water meter (see: column 14, lines 4-11).

One of ordinary skill in the art at the time the invention was made could have also used a water meter within the different utility meters namely electric and natural gas as taught by Johnson et al. with motivation of expanding the Johnson system to other utilities thereby increasing the flexibility and functionality of the system to accommodate user preference providing the users with projected energy usage information, thereby assisting the user with selection of the lowest-priced Energy Provider to best suit their needs.

As per claim 6, Johnson et al. teaches the claimed metering data is electronically transmitted from the utility meter via a telephone line (see: column 20, lines 50-60 and Fig. 1).

As per claim 7, Johnson et al. teaches an Energy Auction System ("EAS") which is made available to users via public or private wired or wireless telecommunication facilities (network) and receives information such as price rates from the Moderator (1, Fig. 1) and the control computer (8, Fig. 1) selects the Energy Provider offering the lowest rate (or best economic value) at the time the users is using a particular control computer (8, Fig. 1) (see: column 9, lines 3-14, 30-47, column 16, lines 28-36 and Fig. 1 and 11).

Johnson fails to explicitly teach price data including grid price point data, distributed generation price point data, demand-side management price point data and alternative fuel price point data.

Since Johnson et al. teaches receiving price rates from the Moderator, it would have been obvious to one having ordinary skill in the art at the time invention was made to have distributed generation price point data, demand-side management price point data and alternative fuel price point data within the price rates received from the Moderator in the system as taught by Johnson et al. with the motivation of providing detailed information to the user of relevant price information, thereby ensuring the lowest cost offered by energy companies.

As per claim 8, Johnson et al. teaches the claimed network is the Internet (see: column 20, lines 50-60 and Fig. 11).

As per claim 9, Johnson et al. teaches that Energy Providers submit bids to supply (in order of the lowest-priced bids first) power to the end users and the control computer selecting the best Energy Providers according to their lowest bids and amount of power offered (see: column 15, lines 15-27 and Fig. 1). In addition, Johnson et al. also teaches the unit or block approach in which a large user can control with some precision how much power or natural gas they consume at any given time or have highly predictable "usage profiles" on a recurring basis (see: column 15, lines 48-52). Additionally, Johnson et al. teaches that residential customer have fairly predictable "usage profile" patterns and would require less monitoring in order to receive prior usage information (see: column 16, lines 10-24).

As per claim 11, Johnson et al. and Takriti teach the unit or block approach in which a large user can control with some precision how much power or natural gas they consume at any

time or have highly predictable usage profiles on a recurring basis (see: Johnson et al.: column 15, lines 48-52). In addition, Johnson et al. also teaches that residential customer have fairly predictable usage profile patterns and would require less monitoring in order to receive usage information (see: Johnson et al.: column 16, lines 10-24).

In addition, Johnson et al. and Takriti teach the collection of actual energy usage data from the end user's meter (12, Fig. 1) (read on "receiving metering data from the utility meter") via the Internet (14, Fig. 12) (see: Johnson et al.: column 20, lines 50-60).

Johnson et al. and Takriti fail to explicitly teach the claimed forecasting step further comprises receiving weather data and forecasting a forecast load based on the weather data.

Bruce et al. teaches a new method for forecasting electricity load-duration curves that estimates sample moments obtained from historical data for a particular time period in this case a week (see: paragraph 3, 8 and abstract). Bruce et al. further teaches a load-duration curve defined over a period of a week that includes significant variation due to weather, holidays, etc. (see: paragraph 8). In addition, Bruce et al. teaches a performance of forecast models in Fig. 4, where combined forecasting is compared to actual data and preliminary evaluations determine whether load curve forecasting procedure are consistently producing good forecasts over different periods of data and whether they are good enough to be incorporated into a production system (see: paragraph 54).

The obviousness of combining the teachings of Bruce et al. with the system taught by Johnson et al. and Takriti are discussed in the rejection of claim 1, and incorporated herein.

As per claim 12, Johnson et al. teaches Energy Providers submit bids to supply (in order of the lowest-priced bids first) power to the end users and the control computer selecting the best

Energy Providers according to their lowest bids and amount of power offered (see: column 15, lines 15-27). Johnson et al. also teaches that each Energy Provider may change its bid as a result of the marketplace demand and in response to competitors' bidding activities (see: column 6, lines 20-36).

As per claim 13, Johnson et al. teaches the claimed additional forecasting data is received via the Internet (see: column 20, lines 50-60 and Fig. 11).

As per claim 14, Johnson et al. teaches that Energy Providers submit bids to supply (in order of the lowest-priced bids first) power to the end users and the control computer selecting the best Energy Providers according to their lowest bids and amount of power offered (see: column 15, lines 15-27). In addition, Johnson et al. teaches the unit or block approach in which a large user can control with some precision how much power or natural gas they consume at any time or have highly predictable usage profiles on a recurring basis (see: column 15, lines 48-52). Additionally, Johnson et al. also teaches that residential customer have fairly predictable usage profile patterns and would require less monitoring in order to receive usage information (see: column 16, lines 10-24).

As per claim 18, Johnson et al. teaches the claimed allowing the customer to choose to receive power from one or more of the plurality of sources of power. This feature is met by the Energy Providers submitting bids to supply (in order of the lowest-priced bids first) power to the end users and the control computer selecting the best Energy Providers according to their lowest bids and amount of power offered (see: column 15, lines 15-27).

As per claims 19-20, Johnson et al. teaches that the Moderator can prepare and transmit to each end user a consolidated billing statement (see: column 10, lines 14-34 and Fig. 1).

Johnson et al. fails to explicitly teach allowing the customer to pay the bill electronically However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include allowing the customer to pay the bills electronically within the preparing and transmitting of an end user's consolidated billing statement as taught by Johnson et al. with the motivation of allowing a quick and efficient way to for the customer to manage bill payments.

As per claim 21, Johnson et al. teaches the claimed automatically implementing the optimal consumption decision, wherein the automatically implementing includes automatically providing power from at least one of the plurality of sources of power to the customer based upon the optimal consumption decision. This limitation is met by the Energy Providers submitting bids to supply (in order of the lowest-priced bids first) power to the end users and the control computer selecting the best Energy Providers according to their lowest bids and amount of power offered (see: column 9, lines 30-47 and column 15, lines 15-27).

5. Claims 43-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,047,274 to Johnson et al. in view of "Forecasting load-duration curves" by Bruce et al.

As per claims 43 and 61, Johnson et al. teaches the claimed feedback system that is implemented for optimally meeting an actual load when the actual load deviates from the forecasted load. This limitation is met by the remotely-readable meter that allow the Moderator computer to collect meter readings once an hour and feed back the process data to the respective Provider permitting the Provider to make frequent adjustments in the amount of power supplied, optimizing their capacity and provisioning activities on a continuous basis (see: column 17, lines 6-16).

As per claim 44, Johnson et al. teaches a Energy Auction System ("EAS") that is made available to user via public or private wired or wireless telecommunication facilities (network) that receives information such as price rates from the Moderator (1, Fig. 1) and each control computer (8, Fig. 1) selects the Provider offering the lowest rate (or best economic value) at the time the users is using the a particular control computer (8, Fig. 1) (see: column 9, lines 3-14, 30-47, column 16, lines 28-36 and Fig. 1 and 11). In addition, Johnson et al. teaches that the Energy Providers submit bids to supply (in order of the lowest-priced bids first) power to the end users and the control computer (8, Fig. 1) selects the best Energy Providers (three lowest) according to their lowest bids and amount of power offered (see: column 9, lines 30-47 and column 15, lines 15-27). Further, insofar as the claim recites, “the server is further configured to receive pricing data from a plurality of sources of power”, there is no requirement that server is actually, actively receiving pricing data. All the prior art needs to show is a server that is capable of (i.e., configured to) receive pricing data as described above by Johnson et al. In addition, Johnson et al. is met by the Moderator preparing and transmitting to each end user a consolidated billing statement (used to forecast load based on billing statement for entire billing cycle or previous bill), based on the actual energy usage data received by the Moderator from that end user’s meter during an entire billing cycle and winning the bid data relating to all selected Providers (price baseline from the plurality of sources of power that won the bid to supply the user) who supplied electric power or natural gas to this end user during that billing cycle (i.e. consolidating billable charges from all Providers of electric power to such end user n one bill and consolidating billable charges from all Providers of natural gas to such end user on another bill) (see: column 10, lines

23-34). This suggests that the winning bid includes all selected Providers (more than one Provider suggesting a percentage) who supply electric power or natural to user.

Johnson et al. fails to teach:

--the claimed server communicating with at least one utility meter and configured to record metering data, receive pricing data and deliver the optimal consumption decision to a customer over the network; and

--the claimed forecast a forecast load based on the received metering data from the utility meter, create a current load shape from said metering data, and compare the current load shape to a load shape from a prior time period based on historical data.

However, Johnson et al. teaches a Moderator's adjunct computer (11, Fig. 1), associated with a primary computer, that provides the primary computer's operating software additional data or operating logic (see: column 20, lines 50 to column 21, lines 6). The adjunct computer (11, Fig. 1) can be employed to collect energy usage data from end users' meters (12, Fig. 1), process that data and transmit such processed data to the Moderator (1, Fig. 1), each end user's current Provider (2, Fig. 1) and the power grid (see: column 20, lines 65 to column 21, lines 4). In addition, Johnson et al. teaches that the adjunct computer (11, Fig. 1) communicates with Moderator (1, Fig. 1) over a digital data link or data bus (16, Fig. 1) (see: column 21, lines 4-6) and since a server is a computer running administrative software that controls access to the network, it would have been obvious to a person of ordinary skill in the art at time the invention was made to use a server communicating with at least one utility meter and configured to record metering data, receive pricing data and deliver the optimal consumption decision to a customer over the network with the adjunct computer as taught by Johnson et al. with the motivation of

providing accurate meter information to the end user thereby allowing the user to make best possible decision regarding selecting cheapest energy provider.

In addition, Bruce et al. teaches a new method for forecasting electricity load-duration curves that estimates sample moments obtained from historical data for a particular time period in this case a week (see: paragraph 3, 8 and abstract). Bruce et al. further teaches a load-duration curve defined over a period of a week that includes significant variation due to weather, holidays, etc. (see: paragraph 8). In addition, Bruce et al. teaches a performance of forecast models in Fig. 4, where combined forecasting is compared to actual data and preliminary evaluations determine whether load curve forecasting procedure are consistently producing good forecasts over different periods of data and whether they are good enough to be incorporated into a production system (see: paragraph 54).

Therefore, it would have been obvious to a person of ordinary skill in the art at time the invention was made to include a new method for forecasting electricity load-duration curves as taught by Bruce et al. within computer-assisted sales system for utilities as taught by Johnson et al. with the motivation of addressing concerns regarding load-duration curve and providing important measures of reliability such as loss of load probability and the expected unserved demand (see: Bruce et al.: paragraph 2).

As per claims 45-47, Johnson et al. teaches the claimed utility meter comprises an electric meter and a gas meter (see: column 6, lines 4-10).

As per claim 48, Johnson et al. teaches the claimed metering data is electronically transmitted from the utility meter via a telephone line (see: column 20, lines 50-60 and Fig. 1).

As per claim 49, Johnson et al. teaches an Energy Auction System ("EAS") which is made available to users via public or private wired or wireless telecommunication facilities (network) and receives information such as price rates from the Moderator (1, Fig. 1) and the control computer (8, Fig. 1) selects the Energy Provider offering the lowest rate (or best economic value) at the time the users is using a particular control computer (8, Fig. 1) (see: column 9, lines 3-14, 30-47, column 16, lines 28-36 and Fig. 1 and 11).

Johnson fails to explicitly teach price data including grid price point data, distributed generation price point data, demand-side management price point data and alternative fuel price point data.

Since Johnson et al. teaches receiving price rates from the Moderator, it would have been obvious to one having ordinary skill in the art at the time invention was made to have distributed generation price point data, demand-side management price point data and alternative fuel price point data within the price rates received from the Moderator in the system as taught by Johnson et al. with the motivation of providing detailed information to the user of relevant price information, thereby ensuring the lowest cost offered by energy companies.

As per claim 50, Johnson et al. and Bruce fail to explicitly teach a server comprises at least one central server communicatively linked to at least one regional server.

However, Johnson et al. teaches a Moderator's adjunct computer (11, Fig. 1), associated with a primary computer, that provides the primary computer's operating software additional data or operating logic (see: column 20, lines 50 to column 21, lines 6). The adjunct computer (11, Fig. 1) can be employed to collect energy usage data from end users' meters (12, Fig. 1), process that data and transmit such processed data to the Moderator (1, Fig. 1), each end user's

current Provider (2, Fig. 1) and the power grid (see: column 20, lines 65 to column 21, lines 4). In addition, Johnson et al. teaches that the adjunct computer (11, Fig. 1) communicates with Moderator (1, Fig. 1) over a digital data link or data bus (16, Fig. 1) (see: column 21, lines 4-6) and since a server is a computer running administrative software that controls access to the network, it would have been obvious to a person of ordinary skill in the art at time the invention was made to use a server comprising at least one central server communicatively linked to at least one regional server with the adjunct computer as taught by Johnson et al. with the motivation of providing accurate meter information to the end user thereby allowing the user to make best possible decision regarding selecting cheapest energy provider.

As per claims 51-52, Johnson et al. teaches a Moderator's adjunct computer (11, Fig. 1), associated with a primary computer, that provides the primary computer's operating software additional data or operating logic (see: column 20, lines 50 to column 21, lines 6). The adjunct computer (11, Fig. 1) can be employed to collect energy usage data from end users' meters (12, Fig. 1), process that data and transmit such processed data to the Moderator (1, Fig. 1), each end user's current Provider (2, Fig. 1) and the power grid (see: column 20, lines 65 to column 21, lines 4). In addition, Johnson et al. teaches that the adjunct computer (11, Fig. 1) communicates with Moderator (1, Fig. 1) over a digital data link or data bus (16, Fig. 1) (see: column 21, lines 4-6).

Johnson et al. fails to teach at least one central server is configured to receive the pricing data from the network, receive the metering data from the at least one regional server and at least one regional server is configured to receive the metering data from the at least one utility meter, transmit the metering data to the at least one central server.

However, since Johnson et al. teach a computer operating software additional data or operating logic as well as communicating over a digital data link and a server is a computer running administrative software that controls access to the network, it would have been obvious to a person of ordinary skill in the art at time the invention was made to use at least one central server is configured to receive the pricing data from the network, receive the metering data from the at least one regional server and at least one regional server is configured to receive the metering data from the at least one utility meter, transmit the metering data to the at least one central server with the adjunct computer as taught by Johnson et al. with the motivation of providing accurate meter information to the end user thereby allowing the user to make best possible decision regarding selecting cheapest energy provider.

As per claims 53-54, Johnson et al. teaches the claimed network is the Internet and wide are network (see: column 20, lines 50-60 and Fig. 11).

As per claim 55, Johnson et al. teaches the claimed allowing the customer to choose to receive power from one or more of the plurality of sources of power. This feature is met by the Energy Providers submitting bids to supply (in order of the lowest-priced bids first) power to the end users and the control computer selecting the best Energy Providers according to their lowest bids and amount of power offered (see: column 15, lines 15-27).

As per claim 56, Johnson et al. teaches the unit or block approach in which a large user can control with some precision how much power or natural gas they consume at any time or have highly predictable usage profiles on a recurring basis (see: column 15, lines 48-52). In addition, Johnson et al. also teaches that residential customer have fairly predictable usage profile patterns and would require less monitoring in order to receive usage information (see:

column 16, lines 10-24). Furthermore, Johnson et al. teaches the collection of actual energy usage data from the end user's meter (12, Fig. 1) (read on "receiving metering data from the utility meter") via the Internet (14, Fig. 12) (see: column 20, lines 50-60).

Johnson et al. fails to explicitly teach the claimed forecast of a forecast load further comprises receiving additional forecasting data, such as weather data and forecasting a forecast load based on the received metering data from the utility meter and the weather data.

Bruce et al. teaches a new method for forecasting electricity load-duration curves that estimates sample moments obtained from historical data for a particular time period in this case a week (see: paragraphs 3, 8 and abstract). Bruce et al. further teaches a load-duration curve defined over a period of a week that includes significant variation due to weather, holidays, etc. (see: paragraph 8). In addition, Bruce et al. teaches a performance of forecast models in Fig. 4, where combined forecasting is compared to actual data and preliminary evaluations determine whether load curve forecasting procedure are consistently producing good forecasts over different periods of data and whether they are good enough to be incorporated into a production system (see: paragraph 54).

The obviousness of combining the teachings of Bruce et al. with the system taught by Johnson et al. discussed in the rejection of claim 44, and incorporated herein.

As per claim 57, Johnson et al. teaches the claimed optimal consumption determination further comprises receiving financial market data and determining an optimal consumption decision based on the received pricing data, the forecast load and the financial market data. This limitation is met by the Energy Providers submitting bids to supply (in order of the lowest-priced bids first) power to the end users and the control computer (8, Fig. 1) selects the best Energy

Providers (three lowest) according to their lowest bids and amount of power offered (see: column 9, lines 30-47 and column 15, lines 15-27). In addition, Johnson et al. teaches an Energy Auction System ("EAS") which is made available to users via public or private wired or wireless telecommunication facilities (network) and receives information such as price rates from the Moderator (1, Fig. 1) and the control computer (8, Fig. 1) selects the Energy Provider offering the lowest rate (or best economic value) at the time the users is using a particular control computer (8, Fig. 1) (see: column 9, lines 3-14, 30-47, column 16, lines 28-36 and Fig. 1 and 11). Furthermore, the Provider may change bids as often as it likes as marketplace demands for energy changes or in response to competitions' bidding activities (reads on "receiving financial market data") (see: column 6, lines 34-36).

As per claim 58, Johnson et al. teaches the claimed automatically implementing the optimal consumption decision, wherein the automatically implementing includes automatically providing power from at least one of the plurality of sources of power to the customer based upon the optimal consumption decision. This limitation is met by the Energy Providers submitting bids to supply (in order of the lowest-priced bids first) power to the end users and the control computer selecting the best Energy Providers according to their lowest bids and amount of power offered (see: column 9, lines 30-47 and column 15, lines 15-27).

As per claims 59-60, Johnson et al. teaches that the Moderator can prepare and transmit to each end user a consolidated billing statement (see: column 10, lines 14-34 and Fig. 1).

Johnson et al. fails to explicitly teach allowing the customer to pay the bill electronically. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include allowing the customer to pay the bills electronically within the preparing

and transmitting of an end user's consolidated billing statement as taught by Johnson et al. with the motivation of allowing a quick and efficient way to for the customer to manage bill payments.

Response to Arguments

6. Applicant's arguments filed 9/13/06 have been fully considered but they are not persuasive. Applicant's arguments will be addressed hereinbelow in the order in which they appear in the response filed 9/13/06.

(A) In response to the Applicant's arguments, it is respectfully submitted that the Examiner has applied new citations and passages from the Johnson et al., Takriti and Bruce references to the amended features of amended claims 1, 44, 51 and 52 at the present time. As such, Applicant's remarks with regard to the application of Johnson et al., Takriti and Bruce to the amended claims are addressed in the above Office Action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Morgan whose telephone number is (571) 272-6773. The examiner can normally be reached on 8:30 a.m. - 5:00 p.m. Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (571) 272-6776. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert Morgan

Robert Morgan
Patent Examiner
Art Unit 3626